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| APPLICATION NO.        | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------|-------------|----------------------|---------------------|------------------|
| 10/600,204             | 06/20/2003  | Wade Summers         | SUM.102             | 9039             |
| 24062                  | 7590        | 03/07/2005           | EXAMINER            |                  |
| CAMORIANO & ASSOCIATES |             |                      |                     | HARAN, JOHN T    |
| 8225 SHELBYVILLE ROAD  |             |                      |                     | ART UNIT         |
| LOUISVILLE, KY 40222   |             |                      |                     | PAPER NUMBER     |
|                        |             |                      |                     | 1733             |

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|------------------------------|------------------------|---------------------|
|                              | 10/600,204             | SUMMERS, WADE       |
| Examiner                     | Art Unit               |                     |
| John T. Haran                | 1733                   |                     |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 14 January 2005.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-29 is/are pending in the application.  
4a) Of the above claim(s) 1-5 and 14-29 is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 6-13 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/20/03, 12/20/04.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_ .

**DETAILED ACTION**

1. Applicant's election of Group II, claims 6-20 in the reply filed on 1/14/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. It is noted that a further restriction was required with in the elected Group as follows:

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 6-13, drawn to a method of welding two layers of thermoplastic material together to form an inflatable product, classified in class 156, subclass 291.
- II. Claims 14-20, drawn to a method of installing a valve for a welded item, classified in class 156, subclass 309.6.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not capable of use together because the process of welding layers together to form an inflatable product has nothing to do with a method for installing a valve for a welded item because an inflatable product does not have to have a valve installed in the claimed manner and the valve can be installed in inflatable products that are not welded.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Theresa Camoriano on 2/28/05 a provisional election was made with traverse to prosecute the invention of Group I, claims 6-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Priority***

3. It is noted that while Applicant claims priority to application 09/879,709 filed on 6/12/01, the limitations recited in claims 6-13 are not disclosed therein. Accordingly, claims 6-13 do not get the benefit of the earlier filing date. The effective filing date for claims 6-13 is 6/20/03.

***Information Disclosure Statement***

4. The information disclosure statements (IDS) submitted on 6/20/03 and 12/20/04 have been considered by the examiner.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 6-11 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method for welding together layers of thermoplastic material to form an airtight, inflatable product, does not reasonably provide enablement for a method of welding together two layers of thermoplastic material for use in any imaginable context. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

The embodiment of the invention to which claim 6 is directed is disclosed solely in discussion of Figures 1-11 which are directed to welding together two layer of thermoplastic material to form an airtight, inflatable product. Claim 6 as currently worded is directed to welding together two layers of thermoplastic material for use in any imaginable context, however the specification does not enabled such. The specification solely enables welding together two layers of thermoplastic material to form an airtight, inflatable product as evidenced by Figures 1-11. Claims 6-11 should be amended to indicate that an airtight, inflatable product is formed.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 6-11 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: providing first and second opposed dies including opposed flat surfaces and opposed recesses adjacent to said

opposed flat surfaces, so as to define the perimeter of the inflatable product; and injecting gas between the layers in order to hold the layers apart from each other within said perimeter.

It is essential to inject gas between the layers so that only the perimeter of the inflatable product is welded together and it is necessary for to stipulate the recesses define the perimeter of the inflatable product in order to establish where the perimeter exists. Claim 6 should be amended to recite such steps and claims 8 and 9 should be cancelled.

9. Claims 6-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 is indefinite because the pressing step makes no sense. The step requires compressing the material 70%. 70% of what? It is entirely unclear what is meant. Does Applicant mean the thickness of an overlap region of the two layers is reduced by at least 30% by compression? Clarification and an appropriate amend to the claim is required.

Claim 12 is also indefinite because the pressing step is confusing. First there is a lack of antecedent basis for "the gap". Second it is unclear if the 60% is measured with reference to the combined uniform thickness of the two layers or just the uniform thickness of just one layer. It appears applicant is attempting to claim that the pressing step reduces the thickness of an overlap between the two layers by at least 40%. The claim needs to be appropriately amended to fix this problem.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 6-8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Dojan et al (US 2004/0055640).

Dojan et al discloses a method for welding together layers of thermoplastic material comprising providing first and second opposed dies having a flat portion and a recess adjacent the flat portion; placing the layers of thermoplastic material between the first and second opposed dies with the flat portions opposite each other and the recessed portions opposite each other; applying energy to the dies to melt the thermoplastic material between the dies; and pressing the dies together to compress the material between the flat portions sufficiently to extrude some of the thermoplastic material into the recesses of the dies to form a weld bead (See Figures 3D-3F). Dojan et al anticipates claim 6.

Regarding claim 7, the dies are heated using radio frequency (See abstract).

Regarding claim 8, the layers on the recessed side of the dies are held apart (See Figure 2D).

Regarding claim 10, the side of the flat portions opposite the recesses are dammed in order to direct the extruded material toward the recesses (See Figure 3F).

12. Claims 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Jones-Hinton et al (U.S. Patent 3,617,589).

Jones-Hinton et al discloses a method for welding together layers of thermoplastic material comprising providing first and second opposed dies having a flat portion and a recess adjacent the flat portion; placing the layers of thermoplastic material between the first and second opposed dies with the flat portions opposite each other and the recessed portions opposite each other; applying energy to the dies to melt the thermoplastic material between the dies; and pressing the dies together to compress the material between the flat portions sufficiently to extrude some of the thermoplastic material into the recesses of the dies to form a weld bead (See Figures 1 and 9-12). Jones-Hinton et al anticipates claim 6.

#### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 7,8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones-Hinton et al (U.S. Patent 3,617,589), as applied above to claim 6.

Jones-Hinton et al is relied upon for the teachings noted above.

Regarding claim 7, Jones-Hinton et al teaches that the thermoplastic layers are heated using a high frequency alternating electric current and is silent towards using radio frequency electrical energy. It is well known and conventional to use radio frequency electrical energy to weld thermoplastic layers together and that the two are alternate expedients and can be utilized interchangeably. One skilled in the art would have readily appreciated using an alternate expedient for high frequency alternating electric current in the process of Jones-Hinton et al, such as radio frequency electrical energy. It would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the thermoplastic layers using radio frequency electrical energy in the method of Jones-Hinton as it is well known and conventional to do so.

Regarding claim 8, Jones-Hinton teaches that the two layers of thermoplastic material are kept apart during the extruding process (See Figures).

Regarding claim 10, one skilled in the art would have readily appreciated damming the side of the flat portion opposite the recesses in order directed the extruded material toward the recesses so that the strongest reinforcing bead possible could be formed. It would have been obvious to do so in the method of Jones-Hinton et al.

15. Claims 9 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones-Hinton et al (U.S. Patent 3,617,589) in view of Rempel (U.S. Patent 2,537,089).

Regarding claims 9, 12 and 13, Jones-Hinton et al discloses a method for welding together layers of thermoplastic material to form table-tennis balls comprising providing first and second opposed dies having a flat portion and a recess adjacent the flat portion, so as to define the perimeter; placing the layers of thermoplastic material between the first and second opposed dies with the flat portions opposite each other and the recessed portions opposite each other; applying energy to the dies to melt the thermoplastic material between the dies; and pressing the dies together to compress the material between the flat portions sufficiently to extrude some of the thermoplastic material into the recesses of the dies to form a weld bead (See Figures 1 and 9-12). Jones-Hinton et al is silent towards making an inflatable product.

One skilled in the art would have readily appreciated that it is well known and conventional that many balls are inflatable and contain valves for inflating the balls. One skilled in the art also would have readily recognized that the method of Jones-Hinton et al is readily adaptable towards forming all types of balls including inflatable balls. Furthermore one skilled in the art would have readily appreciated that the two layers of thermoplastic material would need to be held apart during the welding process as suggested in Rempel, which can be accomplished by injecting gas through a valve extending through one of the layers within the perimeter of the layers to hold them apart during welding (Figure 7; Column 6, lines 40-45). It would have been obvious to one of

ordinary skill in the art to weld two layers of thermoplastic material together to form an airtight, inflatable product such as a ball with a valve in the method of Jones-Hinton et al and to inject gas through the valve to hold the layers apart during the welding process as suggested in Rempel so that only the perimeter is welded.

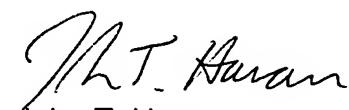
Regarding claim 11, one skilled in the art would have readily appreciated damming the side of the flat portion opposite the recesses in order directed the extruded material toward the recesses so that the strongest reinforcing bead possible could be formed. It would have been obvious to do so in the method of Jones-Hinton et al.

### ***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John T. Haran** whose telephone number is **(571) 272-1217**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John T. Haran  
Examiner  
Art Unit 1733